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| 09/944,098 | 09/04/2001 | Masakazu Ogasawara | 041514-5143 | 1762 |

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EXAMINER

PATEL, GAUTAM

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2655

DATE MAILED: 01/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/944,098

Applicant(s)

OGASAWARA ET AL.

Examiner

Gautam R. Patel

Art Unit

2655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 18-20 is/are rejected.
- 7) ☒ Claim(s) 9-17 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

1. Claims 1-20 are pending for the examination.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. § 119(a)-(d), which papers have been placed of record in the file.

NOTES & REMARKS

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. For example several claims such as claim 9 etc. has bad spelling of "axis". Similarly a coma after first "at" to separate from second "at" would make more sense in reading the sentence. Applicant's cooperation is requested in correcting any errors of which Applicant may become aware in the specification.

Drawings/Objection

4. The drawings are objected for following reasons:
Figures 1-5 are not designated by a legend such as "**Prior Art**". The legend is necessary in order to clarify what applicant's invention is (see MPEP § 608.02g).

Applicant is required to submit a proposed drawing correction in response to this Office Action. Any proposal by the applicant for amendment of the drawings to cure defects must consist of following:

Drawing changes must be made by presenting replacement figures which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments, or remarks,

section of the amendment, and may be ***accompanied by a marked-up copy of one or more of the figures being amended, with annotations***. Any replacement drawing sheet ***must be identified in the top margin as "Replacement Sheet"*** and include all of the figures appearing on the immediate prior version of the sheet, even though only one figure may be amended. ***Any marked-up (annotated) copy showing changes must be labeled "Annotated Marked-up Drawings" and accompany the replacement sheet in the amendment (e.g., as an appendix).***

Content of Specification

5. The disclosure is objected for following reasons.

1. Specification needs to be updated with respect to information on the related applications. Cross-References to Related Applications: See 37 C.F.R. § 1.78 and section 201.11 of the M.P.E.P.

2. This application does not contain an Abstract of the Disclosure as required by 37 C.F.R. § 1.72(b). An Abstract on a separate sheet is required.

Applicant is reminded of the *proper language* and ***format*** of an Abstract of the Disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the **range of 50 to 150 words**. It is important that the **abstract not exceed 150 words in length** since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said", should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," *etc.*

In the present Application, abstract is too long.

3. The title of the invention is neither precise nor descriptive. A new title is required which should include, using twenty words or fewer, claimed features that differentiate the invention from the Prior Art. It is recommended that the title should reflect the gist of or the improvement of the present invention.

Corrections are required.

Claim Objections

6. Claim 9-17 are objected for following reasons.

Spelling of word axis seems to be wrong in several places. For example claim 9, lines 5, 9 and 12.

Corrections and/or explanations are required.

NOTE: For examination purposes a typographical error is assumed for the word "axis", in all the claims.

Claim Rejections - 35 U.S.C. § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-7, 18-19 and 20 are rejected under 35 U.S.C. § 102(e) as being anticipated by Yamamoto et al., US. patent 6,418,098

Claims 1-8, 18-19 and 20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al., US. patent 6,418,098 (hereafter Yamamoto).

As to claim 1, Yamamoto discloses the invention as claimed [see Figs. 1-28, especially 16], including An optical pickup device, a focus error detecting optical element and a photodetector comprising:

a focus error detecting optical element [fig. 4 and 16, unit 8] having an area quadrisected into first through fourth quadrants from the center of an optical path of the return path along two division lines extending corresponding to a direction in which the track extends and a direction perpendicular to the extending direction on a plane substantially perpendicular to the optical path of the return path, for applying the return light passing through adjacent ones of said areas on the same side of said division line with astigmatism in directions rotated by 90 degree from each other about the optical path, and for separating the return light into at least four corresponding to said areas [col. 19, lines 16-55]; and

a photodetector [fig. 4, unit 9] having a plurality of spaced light receiving elements [fig. 16, 31a, 32a, 31, 32 etc.] for receiving the separated return light, each of said light receiving elements having contour lines corresponding to said division lines on an image plane on which a light beam is shaped into a circular beam in the optical system in which the astigmatism is applied, and comprised of two light receiving areas divided by a bisect line extending substantially in parallel with one of the contour lines [col. 19, line 56 to col.10, line 28].

8. As to claim 2, Yamamoto discloses:

said bisect line of said light receiving element extends corresponding to a direction perpendicular to the direction in which the track extends [col. 19, line 56 to col.10, line 28].

9. As to claim 3, Yamamoto discloses:

said bisect line of said light receiving element extends to a position at which signals output from two light receiving areas of said light receiving element, generated

by spots of the return light received on said light receiving element on the image plane on which the light beam is shaped into a circular beam in the optical system in which the astigmatism is applied, is substantially equal [col. 20, line 20 to col. 21, line 25].

10. As to claim 4, Yamamoto discloses:

a calculating circuit [fig. 4, unit 13] connected to said light receiving elements for generating a focus error signal from the sum of differences of signals output from two light receiving areas of said light receiving elements [col. 7, lines 41-48].

11. As to claim 5, Yamamoto discloses:

auxiliary light receiving elements [fig. 16, sections 31a, 32a, 33a etc.] for receiving the return light out of two line image ranges caused by the astigmatism, said auxiliary light receiving elements positioned along the contour line corresponding to the bisect line of said light receiving element [col. 19, line 56 to col.10, line 28].

12. As to claim 6, Yamamoto discloses:

a calculating circuit [fig. 4, unit 13] connected to said auxiliary light receiving elements for calculating the sum of signals output from said auxiliary light receiving elements generated by the return light from two sets of areas existing at diagonal positions in said first through fourth quadrants [col. 19, line 41 to col.10, line 28].

13. As to claim 7, Yamamoto discloses:

a capture range calculating circuit [fig. 4, units 12 and 13] connected to said light receiving element and said auxiliary light receiving elements for adding the sum of signals output from said auxiliary light receiving elements generated by the return light from two sets of areas existing at diagonal positions in said first through fourth quadrants to the sum of differences of outputs from two light receiving areas of said light receiving elements [col. 7, lines 32-48 and col. 19, line 41 to col.10, line 28].

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14. As to claims 18 and 19, they are claims corresponding to claims 5 and 7 respectively and they are therefore rejected for the same reasons set forth in the rejection of claims 18 and 19 respectively, supra.
15. As to claim 20, it is drawn to a method corresponding to the apparatus of claim 1, and is rejected for similar reasons set forth in the rejection of claim 1, supra

Claim Rejections - 35 U.S.C. § 103

16. The following is a quotation of 35 U.S.C. § 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 8, is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al., US. patent 6,418,098 (hereafter Yamamoto) as applied to claims 1 and 5 above.

As to claim 8, Yamamoto discloses all of the above elements including auxiliary light receiving elements and light receiving areas. Yamamoto does not specifically teach the concept of integrating parts together along contour lines. "Official Notice" is taken that both the concept and the advantages of providing integrated parts that fits contour are well known and expected in the art. It would have been obvious to include integrated design that fits the contour parts to the system of Yamamoto as this integrated designs are known to provide the more compact design and thereby saving

space on the circuit and money by providing a single construction. These concepts are well known in the art and do not constitute a patentably distinct limitation, per se [M.P.E.P. 2144.03].

Allowable Subject Matter

18. Claims 9-17 are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. This is subject to overcoming objection of the claims as stated above.

NOTE: Claims 9-17 are allowable over the prior art of record since the cited references taken individually or in combination fails to particularly disclose an optical pickup device which includes a focus error detecting element which includes "cylindrical lenses placed at one set of respective diagonal positions in said first through fourth quadrants, and having central axis extending in direction in which the division line extends and having central axis extending in a direction 90 degrees to the direction in which the division line extends and one set of diagonal positions have the optical axis offset from the division line in parallel". It is noted that the closest prior art, Yamamoto et al. shows a similar apparatus which also function in same way and Tokumitsu et al. (US patent 4,815,027) and Miura et al. (US patent 5,963,316) discloses multiple cylindrical lenses. However Tokumitsu and Miura fails to disclose the arrangement specifically disclosed by the specification and as claimed in the claims 9 and 12.

Other prior art cited

19. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
1. Tokumitsu et al. (US. patent 4,815,027) Optical operation apparatus ..
 2. Ueda et al. (US. patent 4,959,824) Optical information ..

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3. Sugiura (US. patent 4,847,478) Optical pick-up device.
- a. Miura et al. (US. patent 5,963,316) Method and apparatus
4. Compaan (US. patent 4,464,741) Optical focusing-error detection device
5. Ikedo et al. (US. patent 4,794,580) Pickup system in optical
6. Suh (US. patent 4,793,696) Method and apparatus for rapid focus control...
7. Froehlich et al. (US. patent 5,359,184) Optical encoding ...
8. Ernst et al. (US. patent 5,331,622) Compact optical head

Contact information

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gautam R. Patel whose telephone number is (703) 308-7940. The examiner can normally be reached on Monday through Thursday from 7:30 to 6.

The appropriate fax number for the organization (Group 2650) where this application or proceeding is assigned is (703) 872-9314.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ms. Doris To can be reached on (703) 305-4827.

Any inquiry of a general nature or relating to the status of this application should be directed to the group receptionist whose telephone number is (703) 305-4700 or the group Customer Service section whose telephone number is (703) 306-0377.



Gautam R. Patel
Patent Examiner
Group Art Unit 2655

~~December 6, 2003~~

January 6, 2004 *GR*